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The
Historical and Scientific Society
of Manitoba

A Prehistoric Copper Hook

A Paper Read Before the Society

—BY—

CHARLES NAPIER BELL, LL.D., F.R.G.S., &c.

President of the Society

*Author of Our Northern Waters, The Selkirk Settlement and the
Settlers, Historical Names and Places, Mound Builders of Manitoba,
A Prehistoric Work Shop, With the Buffalo Hunters, etc., etc.*

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An Implement of Prehistoric Man

(Read before the Manitoba Historical and Scientific Society)
By the President of the Society, Charles N. Bell, LL.D., F.R.G.S.

Over forty years ago, or to be precise, in August, 1884, I received from Mr. H. W. D. Armstrong, C.E., divisional engineer, in charge of construction on a section of the Canadian Pacific Railway on the north shore of Lake Superior, and in the immediate vicinity of the Pic River, (which is one mile east of the present Heron Bay Station) a most interesting and valuable relic of prehistoric man in the form of a hook shaped implement of native beaten copper, which was found by him in a cutting being made for the main line of the Canadian Pacific Railway, on the east side of the Pic River. This was accompanied by a ground plan and cross section, drawn to scale of the cutting.



The hook, of copper, hammered out of natural ore, 13 inches in length.

Mr. Armstrong, who is now living in Toronto,— was well known to Winnipeg people of forty years ago, is an engineer of repute, having a high standing in his profession, and a very intelligent and cultivated gentleman, which fortunately absolutely guarantees the correctness and authenticity of the information he placed on record, and is afforded in this paper.

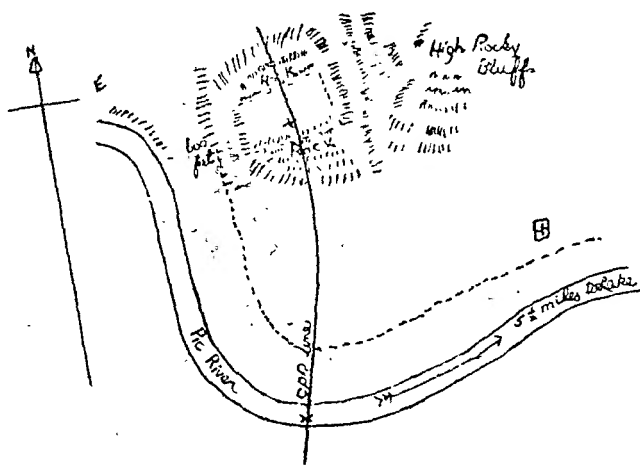
This copper hook was uncovered by a navvy, one of a gang engaged in excavating a clay deposit, in a deep natural cavity of Laurentian rock which lay directly in the projected line of the railroad. It was found at the bottom of the cavity, eighteen feet under a deposit of glacial clay topped by drift gravel, and with the hook was found some pieces of charcoal and charred wood. The article was immediately drawn to the attention of Mr. Armstrong, who, after a critical examination of the location, made a ground plan and cross section, recorded them and forwarded the whole to me. The navvy, however, was very curious as to the material of which the hook was composed and unfortunately, to satisfy his curiosity, broke off about four inches at the upper end, the total original length being 17 inches.

The implement is well rounded, smooth and even in its taper, while showing clearly the laminated form resulting from its being hammered out of a piece of almost pure copper ore. Tapering gradually from one-quarter inch in diameter to a sharp point it has at the lower end two bends, fairly turned, one being four inches from the point with an angle about 40 degrees, and the other at the extreme sharp end, which latter seems to have been made either to prevent a suspended utensil from slipping off if drawn back from the fire when used as a pot hook, but more probably the implement was used as a gaff or large fish hook. Toward the sharp end a number of tiny pitted holes appear as if in the hammering process small pieces of rock combined with the almost pure copper ore had been beaten out, leaving the appearance of small corroded cavities. The upper and larger stem of the hook, however, does not show these cavities to the same extent, but the lamination is more pronounced. In the inside angle of the first bend there is an apparently worn spot having the appearance of being caused by the friction of articles hung upon it. The whole stem or shank has been polished till round and smooth and is not chemically corroded.

Such a large number of copper implements and ornaments have been found about the south shore of Lake Superior and in the Indian mound districts of the Ohio and Mississippi Rivers, as indeed in the mounds of our own Rainy River country, that this particular article would not have any exceptional interest or significance, were it not for the most peculiar situation in which it was discovered and the circumstances under which it was brought to light after having been buried, certainly for geological ages under many feet of water deposited clay, topped by the characteristic drift gravel of the North Lake Superior country. The railroad cutting which revealed the presence of the implement was made directly through a roll of rock which is raised above the level of the immediate surrounding uninhabited country and was situated on the east bank of the Pic River and about 600 feet distant therefrom. On the centre top of this rock a deep cavity existed and this being filled up with clay and gravel it was first supposed by the engineers that the summit or top was a solid mass with a gravel surface imposed thereon, but the stripping of the gravel at once revealed that in fact a deep hollow or depression was in position between four walls or sloping sides. This is clearly shown in the plan and cross section which Mr. Armstrong made for me. The hook was found at the bottom of the cavity on the sloping rock side under about twenty-five feet of drift clay, topped by a layer of gravel. The elevation of the spot by actual measurement was about one hundred feet above the present normal surface of Lake Superior.

It may be interesting to here state that the mean level of Lake Superior above the sea is 602 feet, while its greatest measured depth is 1,008 feet, or 406 feet below sea level. The railroad crossing of the Pic River is about five and a half miles from

Lake Superior. It seems apparent that there would necessarily be a depth of water over the adjacent country before the surface could flow over the surrounding rock walls and fill the enclosed pocket or basin with the drift clay and gravel deposit which actually was found there covering the copper implement, for the Pic River being within such a short distance, 600 feet in fact, and as it runs in a deep rock valley it seems practically impossible that the clay deposit could have been washed into the pocket.



This diagram gives a birdseye view of the rock and shows the position of the cavity, filled to the depth of some 18 feet with glacial clay topped with drift gravel, under which the copper hook was found.

The hook was found, as stated, amidst a number of fragments of charcoal and charred wood, some pieces of which were one and one-half inches in diameter, but the deposit covering this old camp fire of some prehistoric man did not show any layers of vegetable mould or remains, the strata being entirely of clay with a topping of drift gravel characteristic of the neighborhood. No human remains were found. The bottom of the pocket was fairly level and there is no elevation in the immediate vicinity so situated as would cause a local flood to wash the clay and gravel into it from an opening. Any local flood would pour its waters around the base of the rocks directly into the deep valley of the Pic. Indeed, the cross section drawn to scale by Mr. Armstrong shows a ravine of about twenty-five or thirty feet in depth on the eastern side of the mound of rock wall. The slope of the Pic Valley is immediately from the west side of the mound into the Pic River. A few hundred feet to the side of the rocky mound enclosing the pocket and below near to the railway bridge over the Pic are some sandy flats where construction camp was pitched. The whole district is not, and never was, certainly for hundreds of years "inhabited," being a barren waste.

The general contour of the country here south from the Canadian Pacific line follows a series of irregular steps, evidently of old lake beaches, down to Lake Superior. The question of paramount interest naturally arises, at what time or geologic age did a human being place this copper implement in the situation where it was found, and where it lay buried so long? There can be no doubt but that it was left behind by the person who used the fire, the remains of which were around it. The spot was well sheltered from wind and was a secure camping ground on account of the high rocky walls which surrounded it, preventing the lighted fire from being seen even at a short distance. It is well known that modern Indians seek such places to prevent their enemies from detecting their presence.

Is it not a fair conjecture that the human being who left his cherished possession there was one of a people living within a measureable distance of the great northern glacial face, which, under some extraordinary circumstances sent down a vast volume of water and drift thus covering to a great depth the district of country where this copper article lay securely in its pocket in a high rock? After local denudation might leave the sheltered deposit undisturbed while carrying off much material from the lower levels below the rocky mound. Obviously one becomes quite lost when an attempt is made to reduce to the measure of years, centuries, or even geologic ages what time has passed since the clay and drift settled down over this old camping spot.

It is impossible to arrive at the age of such an implement by its appearance or the degree of its workmanlike finish, it being readily understood that different individuals of a tribe, or different tribes inhabiting a country adjacent to each other would at a parallel date manufacture articles from the same material and with the same tools, and which would show good or bad workmanship according to the skill of the individual artificer. An unskilful worker of recent age would not make a better implement than a good worker of a ruder age. This hook was evidently made by a skilful and experienced aboriginal workman who well knew how to hammer it out from pure native copper, but in what age he lived it is impossible to say from any data furnished by its appearance or state of preservation.

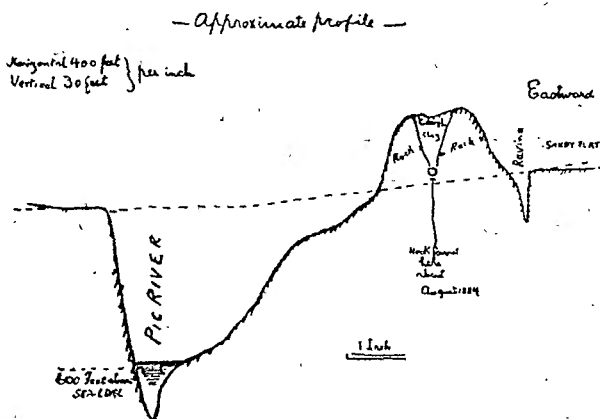
The pure copper deposits of the Lake Superior region are so well known that the fact need not be enlarged upon.

Over half a century ago the Smithsonian Institution at Washington published a full description of an aboriginal copper mine on the south shore of Lake Superior, which had evidently been worked for ages, the pure native copper being extracted from its rocky matrix by the application of fire followed by sudden douches of cold water, this process decomposing the rock surrounding the copper veins. This mine, which was discovered by accident, extended some forty feet downward and a drift at that level was run in a horizontal direction and there was found in it a mass of broken stone mauls, (hard stone boulders having an artificial

grove running around them, which could be attached by strips of hide or withes to a wooden handle), estimated as having a total weight of over two tons, strewn about the bottom. The wide distribution of implements and ornaments of copper from the Lake Superior region, even within historic time, is well known, as the characteristic copper ore of Lake Superior is manifest in the articles found in Indian mounds and more modern burial places throughout Canada and the United States. The annual report of the Peabody Museum at Cambridge, Mass., of 1886, contains a reference to the fact that Dr. Abbott, one of their scientists, had found in the Trenton gravel deposits, New Jersey, interesting palaeolithic implements from various depths in the gravel, but the most interesting specimens were some human remains which he found at the depth of sixteen feet from the surface, not far from where a fragment of a tusk of a mastadon was found some years before, and it is noted that "to whatever geological age these gravels may be assigned ultimately, in them unquestionably we find buried the relicts of the representatives of the earliest men on the Atlantic coast." It is scarcely necessary to refer to the large quantities of mammoth tusks found in the drift gravel deposits in the Yukon country where indeed the ivory so obtained was a regular article of commerce.

Arthur Keith, ex-president of the Royal Anthropological Institute of Great Britain and Ireland, has recently stated:

"The investigations of Dr. Wright and of other American geologists who have studied the physical condition of North America during the Pleistocene period, are of the greatest service to anyone in search of the remains of ancient man. They have shown us that the variations of climate were very similar to those of Europe. They were the same southward extensions of the ice sheet in the colder phases; the same northward retreats in the interglacial or milder intervals."



Horizontal section view of the rock, with dotted lines showing the sides of the cavity and general outline of the adjacent territory.

D. G. Brinton, professor of American archaeology in the University of Pennsylvania, states:

"In the Quaternary the inquiry arises, did the man appear before, during, or after the remarkable lowering of temperature which took place about the middle of it, known as the Glacial Epoch or Great Ice Age? The evidence is almost conclusive that he lived in western Europe certainly, and in America perhaps, before this astonishing change occurred. His rude stone implements have been found in the river gravels of England, France and Spain, associated in original deposition with the bones of tropical animals, such as the hippopotamus, the African elephant, and the hyæna. These belonged to the preglacial fauna of those localities."

Certainly the presence of this implement manufactured by a human being of some intelligence, in such a situation and under such circumstances, must prove deeply interesting to anthropologists, archaeologists and geologists, as it directly raises the question of the antiquity of man on the North American continent, as well as the scientific subject of great geological changes in the north shore of Lake Superior, and indeed of Lake Superior itself.

In explanation of why the above information was not given greater publicity years ago I now explain that the profiles were mislaid by me with a number of valuable original documents relating to the early fur trade in Northwestern Canada and only recently came to light.

Mr. Armstrong visited Winnipeg two years ago and went over the profiles with me and on his return to Toronto examined his notes taken in 1884, as well as the original official reports on deposit in the Canadian Pacific Railway offices in Montreal and wrote me that he could only confirm the information he had sent from the site of the find in 1884.

—CHARLES N. BELL.

